

DRAWING AMENDMENT

The Examiner objects to the drawings for allegedly failing to show every feature of the invention as specified in the claims. More specifically, the Examiner alleges that “gause” for claim 18 must be shown or the claim must be canceled. To address this objection, Figure 4 is amended. No new matter is added. Applicant respectfully requests that the objection to the drawings be withdrawn.

REMARKS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 1-29 were pending prior to this Office Action. Claims 30-36 are added. Therefore, claims 1-36 are pending. Claims 1, 4 and 9 are independent.

§ 102 REJECTION - SANTILLI

Claims 1, 3-4, 6-9, 11, 13-14, 16-17, 19-24 and 26-29 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Santilli et al. (U.S. Patent 5,655,374). Applicant respectfully traverses.

In this instance, independent claim 1 recites, in part, “a formal electric module providable on clothes for absorbing and discharging heat”. In other words, according to the invention as claimed in claim 1, the wearable cooler is capable of both cooling and heating. Contrary to the Examiner’s allegation, Santilli cannot teach or suggest this feature.

More specifically, Santilli is directed toward providing a surgical suit with a high degree of sterility. *See Santilli, column 1, lines 5-8*. Because sterility is required, the surgical suit 10 is designed to cover the entire body of the user. In this way, the user is isolated from the surrounding environment. *See Santilli, Figures 1 and 2; column 3, lines 34-36*. As such, the surgical suit 10 is specifically designed to cool the user wearing the surgical suit. Indeed, Santilli describes at length the effectiveness of the surgical suit in providing cooling air to the user. *See Santilli, column 7, lines 52-67*. However, the surgical suit is not designed to heat the wearer.

The Examiner alleges that the thermoelectric module 78 included in the housing 20 as disclosed in Santilli is equivalent to the thermoelectric module as claimed. The Examiner also alleges that the heat anticipating plates 84 and the heat abstraction plates 80 of Santilli are equivalent to the first heat sink and the second heat sink as recited, respectively.

First, Santilli states “the TEM 78 includes a plurality of large, metal, parallel heat abstraction plates 80”. *See column 4, lines 39-40*. Thus, according to Santilli, the heat abstraction plate 80 is, or is at least a part of, the TEM 78. Under this interpretation, Santilli

cannot teach or suggest the feature of “at least one second heat sink provided at a second side of the thermoelectric module” as recited in claim 1.

Further, according to Santilli, the heat abstraction plates 80 strictly abstracts heat from the air entering through the duct 66 and the resultant cooled air is provided to the user. Therefore, it is clear that the TEM 78 cannot perform both absorbing and discharging heat. For at least this reason, independent claim 1 is distinguishable over Santilli.

Independent claim 4 recites, in part “a thermoelectric module providable on clothes for absorbing and discharging heat”. As noted above, Santilli cannot be relied upon to teach or suggest this feature. For this reason alone, independent claim 4 is distinguishable over Santilli.

But in addition, the Examiner alleges that the air duct 66 and the air outlet 70 are equivalent to the at least one air inlet and the at least one air outlet, respectively, of an external case as recited in claim 4. More specifically, claim 4 recites, in part “an external case surrounding the at least one first heat sink and the at least one first fan, and having at least one air inlet and at least one air outlet”. In other words, the external case as recited surrounds the first heat sink and the first fan.

However, it is noted that the duct 66 and the air outlet 70 is part of the lower formation 60 of the housing 20. *See Santilli, Figure 4*. The lower formation 60 at best surrounds the heat abstraction plates 80, which the Examiner is alleging to be equivalent to the second heat sink as recited. Indeed, just from a simple observation of Figure 4 of Santilli, it is clear that the lower formation 60 cannot surround the heat dissipation plates 84 nor the fan 90. Thus, even under the Examiner’s interpretation, Santilli cannot teach or suggest the feature of the external case as recited in claim 4. For at least the above stated reasons, independent claim 4 is distinguishable over Santilli.

Independent claim 9 recites, in part “a thermoelectric module providable on clothes for absorbing and discharging heat” and “an external case having at least one air inlet and at least one air outlet, and surrounding the at least one first heat sink and the at least one first fan”. It is amply demonstrated above that Santilli cannot teach or suggest either of these recited features. These features are sufficient individually and in combination to distinguish claim 9 over Santilli.

Claims 3, 6-8, 11, 13-14, 16-17, 19-24 and 26-29 depend from independent claims 1, 4, and 9 directly or indirectly. Therefore, at least due to the dependency thereon, these dependent claims are also distinguishable over Santilli. The dependent claims are also distinguishable on their own merits. For example, claim 7 recites that the at least one air outlet is provided in all directions at the external case. As noted above, the Examiner's allegation that the air outlet 70 as disclosed in Santilli cannot be equivalent to the at least one air outlet as recited. But even if it is assumed that the air outlet 70 is an air outlet of the external case, Santilli clearly describes that the air outlet 70 is specifically directed so that the air is discharged towards the user's face. *See Santilli, column 4, line 26.* This provides the maximum cooling to the user, which is the purpose of the surgical suit 10. Therefore, contrary to the Examiner's allegation, Santilli actually teaches away from the feature as recited in claim 7.

As another example, claim 19 recites that the at least one second heat sink and the external case are provided on a rear side of the clothes. Contrary to the Examiner's allegation, Santilli clearly discloses that the housing 20, and thereby the heat dissipating plates 84 (allegedly equivalent to the second heat sink as claimed), is provided above the user's head. It is noted that this is the only configuration where a cool air can be discharged towards the user's face. Thus, Santilli actually teaches away from the feature as recited in claim 19.

For at least the above stated reasons, Applicants respectfully request that the rejection of claims 1, 3-4, 6-9, 11, 13-14, 16-17, 19-24 and 26-29 based on Santilli be withdrawn.

§ 103 REJECTION - SANTILLI

Claims 2, 5 and 10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Santilli. However, it is noted that claims 2, 5 and 10 depend from independent claims 1, 4 and 9, respectively. It is also demonstrated above that independent claims 1, 4 and 9 are distinguishable over Santilli. Thus, or at least due to the dependency thereon, claims 2, 5 and 10 are also distinguishable over Santilli.

In addition, these claims are distinguishable on their own merit. In the Office Action, the Examiner admits that Santilli does not disclose that the location of the heat sink is outside of the clothes. But the Examiner alleges that the location of the heat sink either inside or outside of the

clothes is a mere design choice and there is no criticality or unexpected result. Applicants respectfully disagree.

As noted, the surgical suit described in Santilli is specifically for operating in sterile environments. As such, the entire hear exchange mechanism must be provided within the surgical suit. Otherwise, contamination will result. Air is provided into and out of the surgical suit through specifically defined ducts with filters so that contamination with the surrounding environment is kept to a minimum. Indeed, Santilli states “the present invention provides an ‘isolated’ system in the sense that the ambient air brought into the suit 10 is drawn through a filter disposed upstream of the intake duct 66. After air has been passed over the user’s face and upper body, it is discharged through a filter disposed downstream of the duct 52. Accordingly, the head and upper body of the user are completely isolated from the ambient atmosphere.” See *Santilli, column 7, lines 45-51*.

Clearly, the location of the cooling device being inside the surgical suit as disclosed in Santilli is a requirement, and not a design choice. Therefore, Santilli cannot teach or suggest the features of claims 2, 5 or 10. Indeed, Santilli actually teaches away from these features.

For at least the reasons stated above, Applicants respectfully request that the rejection of claims 2, 5 and 10 based on Santilli be withdrawn.

§ 103 REJECTION - SANTILLI, BELL

Claim 12 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Santilli in view of Bell et al. (U.S. Patent Publication 2003/0029173). Applicant respectfully traverses.

It is noted that claim 12 depends from independent claim 9, and it is amply demonstrated above that claim 9 is distinguishable over Santilli. Bell is not, and indeed cannot be, relied upon to correct for at least the above-noted deficiencies of Santilli. Therefore, claim 9 is distinguishable over the combination of Santilli and Bell. Then, due to at least the dependency thereon, claim 12 is also distinguishable over the combination of Santilli and Bell.

Applicants respectfully request that the rejection of claim 12 based on Santilli and Bell be withdrawn.

§ 103 REJECTION - SANTILLI, FEHER

Claims 15 and 25 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Santilli in view of Feher (U.S. Patent 4,777,802). Applicant respectfully traverses.

It is noted that claims 15 and 25 depends from independent claim 9, and it is amply demonstrated above that claim 9 is distinguishable over Santilli. Feher is not, and indeed cannot be, relied upon to correct for at least the above-noted deficiencies of Santilli. Therefore, claim 9 is distinguishable over the combination of Santilli and Feher. Then, due to at least the dependency thereon, claim 12 is also distinguishable over the combination of Santilli and Feher.

Applicants respectfully request that the rejection of claim 15 and 25 based on Santilli and Feher be withdrawn.

§ 103 REJECTION - SANTILLI, BALKIND

Claim 18 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Santilli in view of Balkind (RU 212658 C1). Applicant respectfully traverses.

It is noted that claim 18 depends from independent claim 9, and it is amply demonstrated above that claim 9 is distinguishable over Santilli. Balkind is not, and indeed cannot be, relied upon to correct for at least the above-noted deficiencies of Santilli. Therefore, claim 18 is distinguishable over the combination of Santilli and Balkind. Then, due to at least the dependency thereon, claim 18 is also distinguishable over the combination of Santilli and Balkind.

Applicants respectfully request that the rejection of claim 18 based on Santilli and Balkind be withdrawn.

NEW CLAIMS

Claims 29-36 are added in this reply. All new claims depend from independent claims 1, 4 and 9 directly or indirectly. Therefore, or at least due to the dependency thereon, the new claims are distinguishable over all cited references individually or in any combination. Applicant respectfully requests that the new claims be allowed.

CONCLUSION

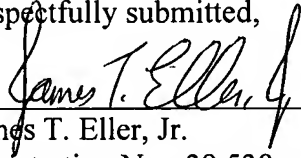
All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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